

THE FIRST
ANNUAL REPORT

ON THE
HEALTH OF THE COUNTY BOROUGH OF WIGAN,

FOR THE YEAR ENDING DECEMBER 31st, 1896,

BY

WILLIAM BERRY,

F.R.C.S.I., D.P.H., F.P. & S., Glasgow,

MEDICAL OFFICER OF HEALTH AND MEDICAL SUPERIN-
TENDENT OF THE BOROUGH SANATORIUM FOR
INFECTIOUS DISEASES.

WIGAN:

THOS. WALL AND SONS, "OBSERVER" OFFICE, WALLGATE.

—
1897.



With M. R. Hs Compliments

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SANITARY AND SEWERAGE COMMITTEE.

From November 1895 to November 1896.

The Right Worshipful the Mayor Alderman Layland, J.P.

Alderman Phillips, Chairman.

Councillor J. T. Gee, vice-chairman.

„ D. Dix, ex-Mayor.

Alderman James Smith, J.P.

„ John Gee, J.P.

Councillor John Alker.

„ Thomas Ashton.

„ Levi Booth.

„ Joseph Clayton.

„ N. ffarington Eckersley.

„ Henry Farrimond.

„ Thomas Fyans.

„ John Gaskell.

„ James Higham.

„ John McQuaid.

„ Elijah Molyneux.

„ E. H. Monks, junior.

„ John H. Prescott.

„ George Stephen.

„ Peter Trickett.

„ James Wilson.

„ John Woods, J.P.

Medical Officer of Health, Wm. Berry, F.R.C.S.I., D.P.H.

Chief Sanitary Inspector, John Sumner.

Town Clerk, J. J. Charnock.

CORPORATION OF WIGAN.

Officer of Health's Department,

March 15th, 1897.

To the Chairman and Members of the Sanitary Committee.

GENTLEMEN,

I have pleasure in submitting my first annual report on the health of your County Borough for the year 1896. This is, I believe, the first annual report that has been presented to you, as previously the usual monthly report was deemed sufficient.

The importance of an annual report on the health of the people inhabiting our large towns and districts must be apparent to you, and although such a report gives much increased work to your sanitary staff, the trouble is amply repaid by the formation of a record which enables us to compare our own work each year, as well as the sanitary arrangements and death-rates of other towns.

The year 1896 will probably turn out to be a record one. When you honoured me with the appointment, infectious diseases were particularly rife, especially small-pox and typhus. Scarlet fever was also present, and measles in epidemic form was also with us. It appeared to me that our first duty was to rid the town of small-pox and typhus. We had, therefore, a conference of the medical practitioners of the town, and I explained my views of the situation, and proposed a plan of proceeding in these cases, which, with their hearty co-operation, ultimately proved successful. April saw our last notification of small-pox and typhus, although we have had since an odd case or so of typhus. Small-pox has remained in abeyance. I have, therefore, to tender my sincere thanks to my medical confrères for their assistance, your Sanitary Inspectors, Mr. Sumner and Mr. Short, for their cordial co-operation and untiring zeal in carrying out my instructions; and, lastly, I have to thank you, gentlemen, for your kind encouragement, and for readily adopting any suggestion I have had the privilege to make with a view to improving the health of the town.

To Mr. Sumner, your Chief Sanitary Inspector, I am much indebted for assistance in the preparation of this report.

I am, Gentlemen,

Your obedient servant,

WILLIAM BERRY,

Medical Officer of Health.

REPORT.

STATISTICAL SUMMARY FOR 1896.

Population estimated July, 1896 60235

Marriages not ascertainable for County Borough.

„ Annual rate per 1,000 of population, ditto.

Births.— { Males 1079 } Total 2144
 { Females ... 1065 }

Annual rate of births per 1,000 35.94

Illegitimate births, 103, or 4.80 per cent.

Deaths.— { Males 714 } Total 1376
 { Females 662 }

Annual rate of mortality 23.09

Natural increase of population, births in excess of
 deaths 768

Total deaths from zymotic diseases 245

Annual rate of mortality from zymotic diseases ... 4.09

Infantile rate, deaths per 1,000 births (1896)..... 186

Inhabited Houses number 10,870. This gives 5.54 persons to each house.

Acreage.—With an acreage of 2,188, and a population estimated at 60,235, we have 27.52 persons per acre.

Population.—The population estimated at the middle of 1896 (June 30) is 60,235, and this estimate may be taken as fairly accurate, as we find from a census taken in July by the School Board authorities, we then had 10,870 inhabited houses, which equals about $5\frac{1}{2}$ persons to each house, and the increase is also in proportion to that which took place in the two last decades. In the census of 1891 the population was 55,013 ; 1881, 48,192 ; and 1871, 39,110.

Births.—The number of births registered during 1896 was 2,144, 1,079 males and 1,065 females. The rate per 1,000 of population being 35.94. This birth-rate is fairly high, though I am not able to compare it with previous years. I may state that the rate for England and Wales for 1895 was only 30.3. The birth of males was slightly in excess of females.

The illegitimate births number 103, or 4.80 per cent., which is high, and undoubtedly has its influence on the mortality rate, especially in children under one year.

The Mortality Rate.—The deaths for 1896 number 1,376, namely, males 714 and females 662, the excess being amongst the males. The rate per 1,000 of the population is 23.09.

The death-rate for each quarter was as follows :—

1896.	All Causes.	Zymotic.
1st Quarter	21.62	5.36
2nd Quarter	23.97	4.36
3rd Quarter	22.49	4.28
4th Quarter	24.29	2.39

The zymotic rate is undoubtedly high, but this is accounted for by the epidemics of small-pox, typhus, and measles in the first two quarters of the year, and by whooping cough and its complications in the third quarter.

TABLE I.

WEEKLY RETURNS OF BIRTHS AND DEATHS FOR 1896.

1896. WEEK ENDING.	Deaths from all cases.	Annual Rate per 1,000.	Deaths from Zymotics.	Births.	Annual Rate per 1,000.
Jan. 4	26	22.81	2	28	24.39
„ 11	23	20.16	3	54	47.35
„ 18	20	17.54	3	35	30.70
„ 25	17	14.91	2	32	28.07
Feb. 1	23	20.15	3	34	29.79
„ 8	22	19.28	4	49	42.94
„ 15	16	14.00	5	38	33.27
„ 22	23	20.13	5	52	45.53
„ 29	26	22.76	10	39	34.15
March 7	32	27.99	9	45	39.37
„ 14	37	32.37	13	49	42.86
„ 21	26	22.74	10	49	42.87
„ 28	30	26.22	11	47	41.08
April 4	31	27.09	10	35	30.59
„ 11	28	24.47	6	41	35.83
„ 18	34	29.72	7	52	45.45
„ 25	30	26.28	6	42	36.68

TABLE I.—CONTINUED.

1896. WEEK ENDING.	Deaths from all cases.	Annual Rate per 1,000.	Deaths from Zymotics.	Births.	Annual Rate per 1,000.
May 2	23	20·08	6	35	30·56
„ 9	27	23·58	5	45	39·30
„ 16	25	21·83	2	38	33·19
„ 23	34	29·69	4	40	34·93
„ 30	28	24·44	3	29	25·32
June 6	28	24·43	5	37	32·28
„ 13	29	25·21	5	39	34·03
„ 20	15	13·08	3	48	41·88
„ 27	25	21·79	3	32	27·89
July 4	25	21·79	6	35	30·51
„ 11	27	24·41	8	40	34·87
„ 18 ¹	22	19·01	4	28	24·36
„ 25	34	29·65	7	46	40·10
August 1	33	28·77	14	34	29·64
„ 8	25	21·71	7	23	20·05
„ 15	29	26·10	4	38	33·07
„ 22	25	21·77	1	51	44·42
„ 29	19	16·56	1	35	30·48
Sept. 5	29	25·24	4	46	40·03
„ 12	16	13·92	3	35	30·46
„ 19	24	20·86	3	37	32·17
„ 26	26	22·60	2	46	40·00
Oct. 3	23	19·98	4	68	59·07
„ 10	22	19·11	3	46	39·96
„ 17	29	25·19	0	45	39·44
„ 24	30	26·04	3	44	38·19
„ 31	24	20·83	2	43	37·32
Nov. 7	34	29·51	4	42	36·45
„ 14	34	29·52	0	49	42·53
„ 21	29	25·15	3	40	34·60
„ 28	20	17·34	0	47	40·76
Dec. 5	27	23·41	4	35	30·35
„ 12	33	28·59	5	48	41·59
„ 19	26	22·53	3	37	32·06
„ 26	33	28·57	5	42	36·39

TABLE II.

TABLE SHOWING COMPARATIVE STATISTICS BETWEEN WIGAN AND OTHER TOWNS DURING 1896.

TOWN.	Population.	Birth Rate.	Death Rate.	Zymotic Rate.	Infantile Death Rate, 1,000 births.	Average Death Rate, last 5 years.
Barrow	53,568 ...	29·02 ...	13·49 ...	1·45 ...	144·	14·5
Birkenhead	108,818 ...	31·93 ...	19·44 ...	3·32 ...	179·5	19·83
Bootle	52,000 ...	33·8 ...	20·13 ...	3·25 ...	184	20·5
Blackpool	36,638 ...	25·66 ...	17·19 ...	1·99 ...	158·5	17·99
Bristol	230,623 ...	27·81 ...	16·84 ...	1·85 ...	138·9	18·8
Burnley	100,000 ...	31·75 ...	18·0 ...	1·33 ...	140·5	20·5
Burton-on-Tr'nt	50,056 ...	30·20 ...	17·08 ...	4·81 ...	134·92	16·79
Carlisle	41,300 ...	30·10 ...	18·20 ...	0·7 ...	137	19·7
Darwen	36,652 ...	28·1 ...	17·1 ...	2·2 ...	181	17·4
Gateshead	98,436 ...	36·0 ...	19·5 ...	3·1 ...	175·5	18·8
Grimsby	57,000 ...	33·	16·	2·26 ...	154·6	18·1
Halifax	95,400 ...	24·4 ...	17·4 ...	1·0 ...	226·2	17·9
Hanley	58,755 ...	35·6 ...	21·1 ...	3·9 ...	213	19·9
Huddersfield ...	100,463 ...	20·54 ...	16·78 ...	1·69 ...	167	17·08
Lancaster	37,029 ...	27·46 ...	14·02 ...	1·37 ...	163 ^{under 5.}	15·57
Maidstone	33,555 ...	23·91 ...	13·47 ...	2·05 ...	133	14·41
Nottingham ...	229,775 ...	28·84 ...	17·63 ...	2·80 ...	171	18·
Northampton ...	65,586 ...	27·4 ...	14·9 ...	2·5 ...	150·6	16·4
Plymouth	90,276 ...	29·3 ...	19·6 ...	2·29 ...	174·1	19·6
Reading	66,739 ...	27·46 ...	13·68 ...	1·68 ...	121·6	15·8
Rochdale	72,880 ...	25·49 ...	19·08 ...	2·1 ...	151	19·47
Southampton ...	98,002 ...	29·17 ...	16·47 ...	1·95 ...	146	18·5
St. Helens	81,110 ...	38·2 ...	20·5 ...	3·68 ...	173	21·8
Stockport	— ...	31·09 ...	20·6 ...	2·9 ...	189	—
Warrington	58,092 ...	37·5 ...	18·6 ...	3·0 ...	163	21·04
West Bromwich	63,000 ...	34·9 ...	19·2 ...	3·0 ...	189	19·8
Wigan	60,235 ...	35·94 ...	23·09 ...	4·09 ...	186	22·62
Wolverhampton	86,530 ...	34·3 ...	19·7 ...	3·50 ...	185	22·0

CAUSES OF DEATH.

THE ZYMOTIC DISEASES.

The mortality from the principal zymotic diseases, namely :—Small-pox, scarlet fever, measles, whooping cough, typhus, enteric, diphtheria, and diarrhoea is at the rate of 4.09 per 1,000 of population, and numbered 245 deaths, but if we exclude diarrhoea, the number of deaths were 197, and which gives a rate of 3.27.

The zymotic rate of 4.09 for 1896 is made up as follows :—

Smallpox	4	.....	Deaths.....	·06 per 1000
Scarlet Fever	8	.....	„	..... ·13 „
Measles	116	.....	„	..... 1·92 „
Whooping Cough	37	.....	„	..... ·61 „
Typhus	7	.....	„	..... ·11 „
Enteric	14	.....	„	..... ·23 „
Diphtheria	3	.....	„	..... ·04 „
Diarrhoea	48	.....	„	..... ·79 „
Puerperal... 2	Cholera Inf.... 1	}	„	 ·13 „
Erysipelas .. 4	Septic			

The zymotic rate during each of the four quarters of the year was :—

1896.....	5·36		4·36		4·28		2·39
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SMALL-POX.

This disease appears to have been introduced into the town by tramps from infected districts. The first case was admitted on May 22nd, 1895, and being a man of nomadic habits, he is supposed to have caught the infection in one of the lodging-houses, but the exact centre could not be distinctly made out. Be this as it may, this case apparently was the means of introducing the disease into the town, because as you will see from the following list of cases which were admitted into the Sanatorium, there is no period between the dates which would allow us to exclude the usual period of incubation, which is said to be fifteen days. When we had a period of 21 days, and no fresh case of small-pox, I felt justified in saying we were free from the disease.

Case No.	1	admitted into Sanatorium	May 22nd, 1895.
„	2	„	„ June 1st, 1895.
„	3	„	„ 5th, both from No. 1.
„	4	„	„ 10th, from Union Work-house.
„	5	„	„ 10th, ditto.
„	6	„	„ 10th, ditto.
„	7	„	„ 11th.
„	8	„	„ 11th, from Union Work-house.
„	9	„	„ 20th, a Sanatorium Nurse.
„	10	„	„ 24th.
„	11	„	„ 24th, a Sanatorium Nurse.
„	12	„	„ 25th, ditto.
„	13	„	July 3rd, from same house as No. 1.
„	14	„	„ 3rd.
„	15	„	„ 3rd.
„	16	„	„ 14th, from same house as No. 15.
„	17	„	„ 16th, from same house as No. 14.
„	18	„	„ 18th.

Case No.	19	admitted into Sanatorium	July 20th.
"	20	"	" 20th.
"	21	"	" 21st.
"	22	"	" 23rd, from same street as No. 21.
"	23	"	" 25th.
"	24	"	" 25th.
"	25	}	" 29th, } from one house in
"	26		" 29th, } neighbourhood of
"	27		" 31st, } Nos. 19 and 20.
"	28		Aug. 6th, } from same house and
"	29	}	" 6th, } same street as No. 23.
"	30		" 6th, same neighbourhood.
"	31	"	" 8th, Sanatorium Nurse.
"	32	"	" 10th, same street as No. 30.
"	33	"	" 12th.
"	34	"	" 14th, same neighbourhood as No. 30.
"	35	"	" 15th, same street as No. 34.
"	36	"	" 15th, } out of same house &
"	37	"	" 15th, } same street as No. 34
"	38	"	" 15th, out of same street.
"	39	"	" 15th.
"	40	"	" 19th, from same house as Nos. 36 and 37.
"	41	"	" 19th, from next street.
"	42	"	" 20th.
"	43	"	" 24th, from same street as Nos. 36 and 37.
"	44	"	" 28th, Sanatorium Nurse.
"	45	"	Sept. 3rd, from same house as No. 17.
"	46	"	" 11th.
"	47	"	" 12th.
"	48	"	" 14th.
"	49	"	" 16th.
"	50	"	" 25th, } from same house.
"	51	"	" 25th, }
"	52	"	" 26th.
"	53	"	" 26th.
"	54	"	" 27th, from same house as No. 48.
"	55	"	" 28th.
"	56	"	" 28th.
"	57	}	Oct. 1st, } from same house as
"	58		" 1st, } No. 52.
"	59	"	" 1st, from same street.
"	60	"	" 1st.
"	61	"	" 1st, from same road as No. 53.
"	62	"	" 2nd, from same street as Nos. 57 and 58.
"	63	"	" 2nd, from same road as No. 53.
"	64	"	" 4th, ditto.
"	65	"	" 4th, ditto.
"	66	"	" 4th, ditto.
"	67	"	" 5th, from next door to No. 62.

Case No.	68	admitted into Sanatorium	Oct. 5th.
"	69	"	" 13th.
"	70	"	" 14th, Sanatorium Nurse.
"	71	"	" 15th.
"	72	"	" 16th.
"	73	"	" 19th, Sanatorium Nurse.
"	74	"	" 22nd.
"	75	"	" 28th, from same road as No. 53.
"	76	"	Nov. 8th, from next door to No. 63.
"	77	"	" 8th.
"	78	"	" 11th, } from same house.
"	79	"	" 11th, }
"	80	"	" 11th.
"	81	"	" 16th.
"	82	"	" 16th.
"	83	"	" 18th.
"	84	"	" 18th, } from same house.
"	85	"	" 18th, }
"	86	"	" 20th.
"	87	"	" 22nd, } from same house as
"	88	"	" 22nd, } Nos. 84 and 85.
"	89	"	" 25th.
"	90	"	" 28th, }
"	91	"	" 28th, }
"	92	"	" 28th, } from same house.
"	93	"	" 28th, }
"	94	"	" 29th, from neighbourhood of No. 84.
"	95	"	Dec. 4th, } from neighbourhood
"	96	"	" 4th, } of No. 84.
"	97	"	" 9th, from same house as No. 82.
"	98	"	" 9th, from the neighbourhood of Nos. 84 and 85.
"	99	"	" 10th.
"	100	"	" 18th.
"	101	"	" 19th, from same house as No. 98.
"	102	"	" 23rd.
"	103	"	" 24th.
"	104	"	" 27th.
"	105	"	" 31st.
"	106	"	Jan. 1st, 1896, from the neighbourhood of No. 103.
"	107	"	" 4th, from same neighbourhood as No. 100.
"	108	"	" 4th, School Teacher in same neighbourhood.
"	109	"	" 6th.
"	110	"	" 8th, from same house as No. 102.
"	111	"	" 9th.
"	112	"	" 11th.
"	113	"	" 13th.
"	114	"	" 16th, } from same house as
"	115	"	" 16th, } No. 105.
"	116	"	" 16th, from same neighbourhood.

Case No.	117	admitted into Sanatorium	Jan. 26th.
„	118	„ „	27th.
„	119	„ „	30th.
„	120	„ „	30th.
„	121	„ „	Feb. 3rd.
„	122	„ „	5th, from same house as No. 107.
„	123	„ „	8th, from same neighbourhood.
„	124	} „ „	10th, } from same house as
„	125		10th, } Nos. 107 and 122.
„	126		16th, } from same house &
„	127		16th, } probably from 117
„	128	„ „	17th, an Undertaker.
„	129	„ „	18th, probably from the Hospital.
„	130	„ „	19th.
„	131	„ „	24th, from No. 124.
„	132	„ „	March 3rd.
„	133	„ „	8th, an Undertaker.
„	134	„ „	10th, from same source as No. 133.
„	135	„ „	11th, probably from 126.
„	136	„ „	21st.
„	137	„ „	22nd, from same house and source as No. 135.
„	138	„ „	April 4th, from same house as No. 136.
„	139	„ „	6th, from same house as No. 133.
„	140	„ „	9th, from same source as No. 132.

The total number of cases admitted and treated in the Sanatorium is 140, and of these 16 belong to the adjoining township of Aspull and Haigh, so that the number for Wigan is 124, but as the number treated was 140, I have included them in this report.

There were 10 deaths, or a mortality of 7.14 per cent.

The number of cases under	5 years of age,	15;	died,	3
„ „ „	25	„	69	0
„ „ over	25	„	56	7
				140
				10

The cases admitted into the Sanatorium during the epidemic from May, 1895, to May, 1896, were as follows :—

1895—May.....	1
June	11
July.....	15
August	17
September	12
October	19
November	19
December	11

1896—January	15
February	11
March.....	6
April	3

The means employed for the extermination of the disease proved effectual, as will be seen by the above table. In January 15 cases occurred an increase of 4 on the previous month. The measures then employed were (through the co-operation of my brother practitioners) : 1, early removal to the Sanatorium ; 2, fumigation of the room, lime-washing, and, if necessary, re-papering ; 3, stoving of bedding and clothes ; 4, re-vaccination, and when this was refused, a modified quarantine ; and I am pleased to point out that the result justified the means.

You will also see from the list of cases that six of the Sanatorium nurses contracted the disease, and all recovered. None of these had been re-vaccinated.

VACCINATION AND RE-VACCINATION.

Of the cases admitted after January 1st, 1896, I have kept a record as to vaccination, and find the following result in 35 cases :—

Well Vaccinated	...	...	...	...	14
Imperfectly	...	...	...	...	13
Unvaccinated	...	...	...	...	8

All the vaccinated cases were mild, and recovered. Of the imperfectly vaccinated, 11 were mild and 2 severe, and 1 died. Of the unvaccinated, 3 were typical and well marked, and 5 were severe and 2 died. The one death occurring in the imperfectly vaccinated was in an old man 53 years of age. None of the subjects had been re-vaccinated.

The following is the list of cases as they occurred :—

Admitted to Sanatorium.	No. of Vaccination Marks.	Nature of Case.	No. of days in Hospital.
Jan. 1, 1896	4	mild	10 days.
„ 4 „	3	mild	20 „
„ 4 „	0	typical	40 „
„ 6 „	3	mild	21 „
„ 8 „	0	typical	22 „
„ 9 „	4	very mild	19 „
„ 11 „	3	mild	22 „
„ 13 „	4	very mild	19 „
„ 16 „	0	severe (died).....	21 „
„ 16 „	3	mild	22 „
„ 16 „	4	very mild	22 „

Admitted to Sanatorium.	No. of Vaccination Marks.	Nature of Case.	No. of days in Hospital.
Jan. 26, 1896	 3	mild	23 days.
„ 27 „	 0	severe (died).....	12 „
„ 30 „	 2	mild	23 „
„ 30 „	 0	confluent	67 „
Feb. 3 „	 2	mild	17 „
„ 5 „	 3	mild	31 „
„ 8 „	 1	severe (died).....	21 „
„ 10 „	 3	very mild	10 „
„ 10 „	 2	„	12 „
„ 16 „	 3	mild	20 „
„ 16 „	 2	„	20 „
„ 17 „	 2	„	26 „
„ 18 „	 2	„	18 „
„ 19 „	 1	„	24 „
„ 24 „	 2	„	26 „
March 3	 3	„	11 „
„ 8 „	 2	„	10 „
„ 10 „	 2	„	11 „
„ 11 „	 2	severe (died).....	5 „
„ 21 „	 0	„	28 „
„ 22 „	 4	mild	11 „
April 4 „	 0	severe	28 „
„ 6 „	 2	mild	12 „
„ 9 „	 0	severe	42 „

We had some marked examples of the efficacy of re-vaccination. The Public Vaccinator (Dr. Bradbury) gave me all the assistance in his power. In more than one instance we had all the persons who had been directly exposed to the infection with the exception of one, re-vaccinated, and that one person took the disease whilst the others escaped.

Knowing that the Vaccination Laws had not been enforced in Wigan for some time, and the occurrence of cases in unvaccinated children, and also the terrible scourge which had fallen on the citizens of Gloucester, I addressed the following letter to the Board of Guardians.

CORPORATION OF WIGAN.

Officer of Health's Department,

April 9th, 1896.

To the Chairman and Members of the Wigan Board of Guardians.

GENTLEMEN,

I have refrained till now from asking you to exercise your powers by enforcing the Vaccination Acts in reference to vaccination. I feel that I should be wanting in my duty as Medical Officer of Health to the County

Borough of Wigan were I longer to neglect doing so, on account of the cases of small-pox which are now arising in the borough. Since January 9th last, I have, with the assistance of my sanitary inspectors, the co-operation of my medical brethren, and the valuable aid of your public vaccinator (Dr. Bradbury), used every effort to stamp out this loathsome disease. We so far succeeded up to April 4th, when we had only two almost convalescent cases in the Sanatorium, and no case notified for a fortnight. A fresh case, however, arose in an unvaccinated adult, and was at once removed to hospital, and to-day I have had a case removed to the Sanatorium from the immediate vicinity of your Workhouse. This is a child 16 months old, and, as in the previous case, unvaccinated. The calamity which has overtaken the unfortunate City of Gloucester, makes me dread a fresh outbreak of the disease here, and as the recent cases in the town have occurred mostly in the unprotected, I think I am justified in asking your board to assist us in our endeavours by protecting the little ones that cannot help themselves. With all respect to the anti-vaccinators, vaccination efficiently performed is the only protection against small pox which medical science has discovered. If your board will accede to my request it will only be following the lead of several others who have for several years allowed the Vaccination Acts to be a dead letter. Gloucester, Coventry, and several other Boards of Guardians have lately rescinded their former resolutions, and are now enforcing the present laws. The Royal Commission having sent a commissioner, or medical expert to report on the Gloucester, outbreak may be months before they issue their report, and, so far as we are concerned, all the mischief may have been done. Your Medical Officer can give you some marked information with reference to re-vaccination, and I can only say that I would be willing to show to any sceptic the difference in the severity of the disease in the protected and unprotected. The fatal cases in children under five years have been in the unvaccinated. In conclusion, I wish to add that the enforcement of the Acts should be for the whole Wigan Union, so that each vaccination officer would be carrying out the same instructions of your board. Regretting the necessity of this letter.

I am, Gentlemen,

Yours obediently,

WM. BERRY.

The Board of Guardians at its meeting, at which the above letter was read, carried a resolution by 19 to 3 votes "That instructions be issued to the whole of the vaccination officers in the Union calling attention to the powers given to Guardians to enforce the Vaccination Law, and to see that it is carried out." Since this time the report of the Royal Commission on Vaccination has appeared, and whilst it is with much regret of those who are practically conversant with small-pox, that no recommenda-

tion is made for compulsory vaccination and compulsory re-vaccination, the report, even of the minority, admits the apparent benefit derived by both operations. It must not be forgotten that the report does not alter in any way the existing Vaccination Laws, which are compulsory, and until the legislature repeal, or amend them, it is the duty of the Boards of Guardians to carry them out through their appointed officers; nay, more, it has recently been stated that no special resolution of the board is required for the vaccination officer to take proceedings against defaulters, but that officer, being appointed by a resolution of the board to carry out the Vaccination Act, can legally take proceedings without throwing the responsibility on a body of men who are subject to a periodic re-election. Vaccination and periodic re-vaccination makes small-pox, though the most contagious, the most controllable of infectious diseases. So much faith had I in primary vaccination that I allowed case No. 127 to keep her baby with her, which was only five months old, but recently vaccinated, and although it was with her in bed all the time, and took the breast, yet no harm resulted.

SCARLET FEVER.

We had 151 notifications of this disease for the year 1896, and 8 deaths.

	Notifications.	Removed to Sanatorium.	Deaths.
January	8	0	0
February	15	0	1
March	9	0	1
April	11	1	2
May	18	11	0
June	28	7	1
July	11	4	0
August	10	3	1
September	10	5	1
October	12	3	0
November	10	4	1
December	9	5	0
	151	43	8

Owing to the prevalence of small-pox and the small-pox wards being within close proximity to the scarlet block, and also the prevalence of typhus, I determined, till such cases were absent, not to admit any new cases into the scarlet fever wards. In consequence of this determination it was necessary to adopt some means of isolating scarlet fever cases in

their own houses. I asked your inspectors to assist in the plan which I thought would be successful, namely, a method of "sufficient isolation," and free use of disinfectants. The houses to be visited not less frequently than twice a week, so as to see that our instructions were carried out. Mr. Short, our assistant inspector, generally performed this work, and although it added very considerably to his work, he entered into the duties with a spirit which was likely to make our efforts successful, and to his efforts, as well as Mr. Sumner's assistance, we owe much of the success of the plan, for if the work had been carried out in a half-hearted manner it must have failed. Isolation in some of the houses was very difficult, but with a little persuasion, and encouragement in some cases, threats as to consequences in others, if the instructions were not followed strictly, generally caused those in charge to use every precaution. The method adopted gave us satisfaction; we had 107 cases in 92 houses to deal with, and 332 children of susceptible age. After small-pox and typhus had disappeared we again admitted cases to the scarlet wards, admitting the first case in April. Since then, although relaxing the stringency as regards admission, I have only admitted those cases where we thought "sufficient isolation" could not be accomplished, or where we had special reasons for removing the patient; so that for the year 1896 we have only had removed 28.47 per cent. of the cases notified, against 57.14 per cent. in the previous year. I need not point out that this is a saving to the ratepayers, if we have succeeded in preventing further spread by the means employed. There is no difficulty now in getting parents to allow their children to be removed, but as there is a "parental responsibility" it is only right that this should be exercised even in infectious cases, and removal to the Sanatorium should be for the benefit of the community, and not to oblige private individuals. No doubt the restrictions we place on those in charge of the cases where home isolation is adopted are irksome, especially in mild cases, when the children are difficult to keep in one room, but we have little to complain of in the way of neglect. In one case, however, it was necessary to take proceedings against the parents. In this case the parents kept a greengrocer's shop, and we offered to remove the patient to the Sanatorium so as not to interfere with their business, but they desired to have the case at home, and promised to carry out our instructions if allowed to do so. The child, in the desquamating stage, was found by Mr. Short playing in the street. He reminded the parents of their promise, and asked them again to carry out our instructions, but again these were ignored. I visited the house myself and found the child was desquamating, and no precautions were taken, so I asked the Town Clerk to prosecute the parents for wilful exposure, and this he did under Section 126 of the Public Health of 1875, summoning both the father and mother of the child. The magistrates took a serious view of the offence, and fined the father 40s. and costs.

MEASLES.

This disease was epidemic during December, 1895; January, February and March, 1896, and during the year caused from its complications 116 deaths, a rate of 1.92. As measles was not then notifiable, I am unable to state the number of cases, but have tabulated the number of deaths in each month.

1896.	No. of Deaths.
January	5
February	20
March.....	34
April	23
May.....	11
June	7
July	7
August	* 6
September	2
October	0
November	0
December	1
Total	116

In consequence of the deaths, and the absence from school of a large number of children, I advised the committee to close the following schools for a period of 18 days from March 26th to April 13th, 1896, and to have the schools fumigated in the meantime, namely :—

The National Schools.
 St. Patrick's Schools.
 St. John's Schools.
 St. Catherine's Schools.
 St. Catherine's (Whelley) Schools.
 St. George's Schools.
 St. Mary's Schools.
 St. Joseph's Schools.
 The Presbyterian Schools.
 St. Thomas's (Caroline Street) Schools.
 St. Thomas's (Clayton Street) Schools.
 St. James's Schools.

Your Committee at once adopted the recommendation, closing the schools till April 13th, 1896, and requiring such schools to be fumigated.

This had a beneficial effect, as you will see from the table of deaths, there being a gradual decline of deaths till October, when measles was entirely absent from our death returns.

In November I asked the Sanitary Committee, after ascertaining the views of the medical men practising in Wigan and the neighbourhood, and also finding that the Medical Officer of Health for Newcastle-upon-Tyne had prevailed upon his Council to make the notification of measles compulsory, to try for a period of three years a system of voluntary notification of measles, a notification of the first case occurring in a household, and for which the usual notification fee should be paid. The Committee kindly adopted the suggestion, and this was confirmed at the December Council Meeting. This is only an experiment, and if no benefit results can easily be given up. I have made the recommendation, being fully alive to the fact that many people do not call in medical aid in cases of measles, and also that measles is highly infective in the premonitory stage.

A append here a form of certificate or notice to the head teacher of any school which an infected child has been attending. This enables the teacher to assist us by preventing other children attending from the infected house, and the certificate itself can be filed for the Education Department, and thus prevent the school managers being at any loss in grant through our action.

EDUCATION CODE, 1896.

SANITARY DEPARTMENT,

17, RODNEY STREET, WIGAN,

189

To _____

Schools.

The Children from _____, where
_____ prevails, or has recently prevailed, must not
attend your School for _____ Weeks from this date.

NOTE.—It is desirable, for the purpose of preventing the spread of the disease above referred to, that no person from the house above mentioned shall attend School until all danger of infection is passed. Where SCARLET FEVER or SMALLPOX exist in any family, no child shall attend School from the house for a period of at least Six Weeks for the first-named, and Eight Weeks for the last-named, disease, after the occurrence of the last case. In the case of DIPHTHERIA, the period shall be Five Weeks ; in MEASLES, Three Weeks ; in ENTERIC (Typhoid) FEVER, Four Weeks. By the diligent exclusion from School of Children coming from infected houses, or being themselves not free from infection, much may be done to prevent the spread of the disease. In the event of any difficulty the Medical Officer of Health will be glad to confer with either Managers or Teachers on the subject.

By direction of the Medical Officer of Health.

CHIEF SANITARY INSPECTOR.

WHOOPING COUGH.

The number of deaths from whooping cough and its complications for 1896 are 37.

Whooping cough, like measles, is a highly infectious disease, and especially in the early stages. We have no means of knowing the number of cases of sickness in this disease, but like measles there must be a large number of cases for each death.

The disease is largely spread through carelessness, in the belief that it is a necessary disease for children to have, and in the same way the fatality is increased by the belief that fresh air out of doors is essential for its treatment. Hence no precautions as a rule are exercised, so as to prevent the lung complications which frequently arise.

The number of deaths are shown as follows :—

1896—January	1
„ February	3
„ March	0
„ April	2
„ May	4
„ June	4
„ July	2
„ August	0
„ September	3
„ October.....	3
„ November	3
„ December.....	12
Total.....	<u>37</u>

In my report for the four weeks ending December 12th, 1896, I pointed out the increasing number of deaths, and pointed out the chief cause of its fatality. Your Committee desired me to draw up some instructions for the purpose, if possible, of preventing its spread, and for lessening its fatality. The following instructions were drawn up and posted on the walls, as well as a number of handbills distributed :—

COUNTY BOROUGH OF WIGAN.
W H O O P I N G C O U G H .

Sanitary Office, Rodney Street,
December, 1896.

In consequence of the report of the Medical Officer of Health as to the prevalence of WHOOPING COUGH in the Borough, and the number of deaths arising from complications [which are very often due to neglect of ordinary precautions in the treatment of the disease], the Sanitary Committee call the attention of householders to the following :—

1. Whooping cough is a HIGHLY INFECTIOUS DISEASE, and is the most fatal (from complications) of all the infectious complaints of childhood under the age of five years.

2. The infection is given off by the breath and secretions from the lungs.

3. The infection is carried in the air, but also clings to articles of clothing.

4. It is infectious for at least 6 weeks from the onset of the cough.

5. The disease may be prolonged for months if the child is exposed to cold air.

PRECAUTIONS TO BE OBSERVED.

1. As soon as the disease is recognised isolation should be carried out. That is, the patient should be kept in a warm room, apart from the rest of the family.

2. Disinfectants (which can be obtained at the Sanitary Office) should be used in the room.

3. Pieces of soft rag (not pocket handkerchiefs) should be used for the mucus from the nose and to remove the phlegm when the child coughs ; THESE SHOULD THEN BE BURNED.

4. Young children should not be allowed to play with the patient or enter the room.

5. If any sign of bronchitis or lung mischief appears, medical aid ought to be obtained.

6. The patient ON NO ACCOUNT MUST BE TAKEN OUT OF DOORS till the whoop has entirely disappeared.

7. AS WHOOPING COUGH is one of the infectious diseases the Sanitary Authority desires to call parents' attention to the provisions of the Public Health Act, 1875, which enacts that :—

1. Any person who, while suffering from any dangerous infectious disease wilfully exposes himself, without proper precautions against spreading the said disorder in any street, public place, shop, inn, or public conveyance, or enters any public conveyance without previously notifying to the owner, conductor, or driver thereof, that he is so suffering ; or

2. Being in charge of any person so suffering, so exposes such sufferer ; or

3. Gives, lends, sells, transmits, or exposes (without previous disinfection), any bedding, clothing, rags, or other things which have been exposed to infection from any such disorder, SHALL BE LIABLE TO A PENALTY NOT EXCEEDING £5.

THE PRECAUTIONS HERE GIVEN FOR WHOOPING COUGH ARE ALSO APPLICABLE TO MEASLES.

By Order of the Sanitary Authority.

JOHN SUMNER,

Chief Sanitary Inspector.

TYPHUS FEVER.

Typhus was prevalent during the latter half of the year 1895, and in the early months of 1896.

During the year we had 20 cases notified, namely :—

1896.	No. of Cases.	Deaths.
January	10	3
February	2	0
March	3	1
April	1	1
May.....	0	0
June	0	0
July.....	2	1
August	0	1
September	2	0
October	0	0
November	0	0
December	0	0
Total	20	7

Eighteen cases were admitted into the Sanatorium. The other two cases it was not thought desirable to remove, as there was not any likelihood of further spread from them.

Typhus is a highly infectious disease, and demands early isolation. It has been with us more or less since the severe epidemic of 1892. My medical brethren again rendered me valuable assistance by calling me in to see doubtful cases, and notifying early. We had the cases promptly removed, the houses fumigated, and the bedding stoved ; in one case it was necessary to have the bedding destroyed, as it was in such a filthy condition. The next step after we had done our duty on the part of the Sanitary Authority was to serve notice on the agent or owners of the houses to have them thoroughly cleansed and lime washed. In this at first we were not so successful, as often the work was very much delayed, it became necessary therefore, to shorten the notice and take steps to enforce the same, and in one case we had to take proceedings before the magistrates. As the work was being done when the case was heard, costs only were inflicted. Typhus, like small-pox, requires immediate action to be taken, but unlike the latter disease we possess no prophylactic agent which will assist us to stamp it out. When I took over the charge of the Sanatorium one nurse was suffering from a very severe attack of typhus, but after a prolonged convalescence she ultimately recovered. I am pleased to say that since September we have been free from the disease, and we have used the wards for the isolation of enteric, when it was desirable to have them removed.

ENTERIC FEVER.

Enteric fever is more or less endemic with us. There was not a single month that we had not a notification certificate. We had 101 cases notified, varying in numbers in each month.

1896.	No. of Cases.	Deaths.
January	4	0
February	6	0
March.....	7	2
April	9	0
May.....	5	3
June	6	0
July.....	8.....	0
August	10	0
September	14	4
October	12	1
November	5	2
December	15	2
	101	14

The number of cases treated in the Sanatorium were 32, and the remainder in their own houses.

Enteric fever is mostly contagious from the dejections, and does not spread in a similar manner to the other fevers, although it is believed by some that the disease may spread through the exhalations of the body. It is a disease entirely due to deficient sanitary arrangements, and when it is in its epidemic form it is due to one common cause, generally a polluted water or milk supply. Defective sanitary arrangements, such as imperfectly trapped and inefficiently ventilated sewers, and the old privy middens are all breeding places for the germ of enteric fever should once it gain admission. Then again, faulty foundation of houses, such as those built in situations where refuse matters have been deposited for the purposes of filling or levelling ; unpaved and insanitary yards also afford a suitable subsoil for the development of this germ.

The number of deaths from enteric for the year 1896 are 14, a rate of .23. In no case did we find the milk supply at fault. The continued drought and the want of sewer flushing probably accounts for the increase in the number of cases after June.

The cases of continued fever which were notified, I found on visiting them that they were cases of enteric.

The adoption by the Committee of my recommendation as to the more frequent cleaning out of the street gulleys, and the use of persulphate of iron as a deodorant, had, I feel sure, a good effect during the prolonged dry weather.

DIPHTHERIA.

Diphtheria is not a prevalent disease in Wigan. We have had 10 cases notified during the year. All these cases were treated at home, without giving rise to any extension to others.

There were 3 deaths, a rate of .04. Sewer gas is undoubtedly a means of conveying the germ, and just as polluted water is the cause of enteric fever being propagated, sewer gas containing the germ of diphtheria is the agent for the propagation of diphtheria.

DIARRHŒA.

The deaths from diarrhœa have been chiefly in children, and number 48, and occurred in the following months :—

1896.	Deaths.	0-1 Year.	1-5 Years.	Over 5 Years.
January	0	0	0	0
February	1	0	0	1
March.....	1	1	0	0
April	0	0	0	0
May.....	2	0	1	1
June	2	0	2	0
July	13	7	3	3
August	18	17	1	0
September.....	2	2	0	0
October	6	3	2	1
November	1	1	0	0
December	2	0	1	1
Total	48	31	10	7

The average diarrhœa rate is .79 per 1,000.

It will be observed that the greatest number of cases occur in children under one year, next 1-5 years, over 5 the smallest number. The greatest number of deaths occurred in July and August. The cause of the disease in young children is generally due to artificial feeding, namely, by the use of the feeding bottle, ignorance and carelessness contributing largely to the cause. The food is often not suitable, and sufficient care is not exercised in the cleansing of the apparatus employed, hence decomposition takes place, and contaminates the fresh food by micro-organisms, which give rise to the vomiting and purging. The diarrhœa in older children and adults is generally from eating unripe or decomposing fruits, injudicious drinking of cold fluids in the hot season, and neglect generally of personal hygiene. We may safely say that since the old privy system of excrement removal has been abolished, and the sewerage system been attended to, that the diarrhœa which used to be so prevalent 25 years ago has disappeared, and this through improved sanitation.

ERYSIPELAS.

Erysipelas is one of the minor zymotic diseases, and is infectious. It has caused 4 deaths. As it is not notifiable, I am not in a position to give the number of cases. It is not a very fatal disease. All we can do when we know of a death is to enquire into the sanitary surroundings.

PUERPERAL FEVER.

Puerperal fever is notifiable, and 7 cases have been notified. Two deaths have occurred from this disease, but it has been unnecessary for me to caution any of the attendants on the cases, as the cause of infection could not be traced.

SANATORIUM.

This is highly appreciated, and places your Medical Officer of Health in a position of preventing the spread of infectious diseases to a considerable extent. As previously mentioned in this report, it was necessary in the interests of those afflicted to keep out all other infectious diseases whilst we had small-pox and typhus in epidemic form. Since May however, after the epidemic of small-pox was over, the isolation blocks have been used in such cases, where it was deemed that *sufficient isolation* could not be effected at home, or in other words, where there was not "proper lodging and accommodation." We have had no difficulty in inducing patients to enter the wards, but have been several times pressed to take in cases, even where sufficient isolation could have been maintained at home.

The number of cases notified is 324 ; the number of cases removed to Sanatorium 128, a percentage of 38.88 ; and from Aspull, Haigh, &c., 6 cases have been admitted and treated. These are reckoned in with the total number of cases removed, therefore the percentage of removals for Wigan is only 37.65.

The notifications were as follows :—

		Removed to Sanatorium.	Died.
Smallpox	33	35	3
Typhus	20	18	6
Scarlet	151	43	3
Enteric	101	32	8
Continued	2	0	Other diseases 2
Diphtheria	10	0	—
Puerperal.....	7	0	—
Total	324	128	22

The number of deaths in the Sanatorium was 22, 20 from zymotic diseases, showing a percentage 17.18, a heavy death-rate, but mainly attributable to complications. In the cases of typhus and enteric, pneumonia was the secondary cause of death.

No. of notifications compared with other years :—

Disease.	1890.	1891.	1892.	1893.	1894.	1895.	1896.
Smallpox	—	...	12	13	2	91	33
Typhus	1	71	18	20	34	33	20
Scarlet	232	381	219	335	359	161	151
Enteric	72	95	85	264	68	64	101
Continued	83	77	29	71	32	29	2
Diphtheria.....	5	18	20	16	10	13	10
Puerperal	7	—	12	10	7	5	7
Total ...	400	642	395	729	512	396	324

Analysis of notifications :—

	Jan.	Feb.	Mar.	Apl.	May.	June.	July.	Aug.	Sep.	Oct.	Nov.	Dec.	Total.
Smallpox	14	10	6	3	0	0	0	0	0	0	0	0	33
Typhus	10	2	3	1	0	0	2	0	2	0	0	0	20
Scarlet	8	15	9	11	18	28	11	10	10	12	10	9	151
Enteric	4	6	7	9	5	6	8	10	14	12	5	15	101
Continued	1	0	0	0	0	0	0	0	0	0	0	1	2
Diphtheria	0	0	3	1	0	2	1	1	0	0	0	2	10
Puerperal	0	0	1	0	1	0	0	0	1	3	1	0	7
	37	33	29	25	24	36	22	21	27	27	16	27	324

Table of admissions and discharges from the Sanatorium during the year 1896 :—

1896.	Smallpox.	Scarlet.	Enteric.	Typhus.	Others.	Total.
Admitted.....	35	43	32	18	0	128
Discharged	47	32	18	27	0	124
Died	3	3	8	6	2	22
1895.						
Admitted.....	105	92	2	37	2	238
In Hospital, Dec.						
31st, 1896	—	9	1	—	1	11

The average stay of each Patient in the Sanatorium was... Days. 28.05

The average for Smallpox cases was..... 21.71

„ „ „ of the well-vaccinated was 18.64

During the year there were 124 patients discharged from the Sanatorium, and 22 died, making a total of 146. The number of days these occupied the hospital was 3,591, or an average of 24.59 days for each patient.

The cost of maintenance was as follows :—

1896.	Food.				Stimulants.		
	£	s.	d.		£	s.	d.
January	71	8	11	.....	—		
February	33	14	6	.....	5	13	6
March	28	17	7	.....	2	11	4
April.....	22	1	11	.....	1	18	9
May	4	13	11	.....	2	2	0
June	5	18	1	.....	0	18	4
July	10	2	6	.....	1	1	7
August.....	10	18	6	.....	3	10	6
September	11	16	6		2	7	4
October	12	8	10		1	6	1
November	7	7	0		1	15	11
December.....	17	3	9		4	6	4

£236 12 0		£27 11 8
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Cost per Patient.....	£1 12 4 $\frac{3}{4}$		£0 3 9 $\frac{1}{4}$
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The administrative department cost :—

1896.	Wages.				Board.				Porter, Repairs, and Sundries.				Total.		
January	33	13	4	...	34	13	4	...	81	7	2	...	149	13	10
February ...	32	1	8	...	32	10	0	...	67	8	0	...	131	19	8
March.....	35	10	0	...	36	16	8	...	26	12	10	...	98	19	6
April	26	17	1	...	26	10	0	...	105	19	11	...	159	7	0
May.....	24	8	4	...	21	16	8	...	24	9	5	...	70	14	5
June	25	5	0	...	23	16	8	...	26	1	10	...	75	3	6
July	25	16	8	...	25	4	1	...	46	15	10	...	97	16	7
August	24	2	11	...	23	10	4	...	85	4	3	...	132	17	6
September. .	22	16	8	...	21	13	4	...	31	2	7	...	75	12	7
October	24	4	7	...	22	16	8	...	75	11	0	...	122	12	3
November ...	24	1	8	...	23	16	8	...	23	19	7	...	71	17	11
December ...	24	1	8	...	23	16	8	...	29	14	3	...	77	12	7
	322	19	7	...	317	1	1	...	624	6	8	...	1264	7	4

The total cost of Sanatorium for 1896 is as follows :—

	£	s.	d.		Per Patient.		
	£	s.	d.		£	s.	d.
Master, Matron, and Nurses ...	640	0	8	.....	4	7	8 $\frac{1}{9}$
Porter, Repairs, &c.	624	6	7	.....	4	5	6 $\frac{1}{3}$
Patients' Keep	236	12	0	.....	1	12	4 $\frac{8}{9}$
„ Stimulants	27	11	8	.....	0	3	9 $\frac{1}{3}$
Medical Superintendent and Medical Services	125	0	0	.....	0	17	1 $\frac{4}{9}$
	£1,653	10	11	.....	£11	6	6 $\frac{1}{9}$

The Sanatorium Staff consists of :—

Master and Matron.

Assistant Matron.

Six Nurses.

Cook.

Laundry Maid.

House Maid.

CONSTITUTIONAL DISEASES.

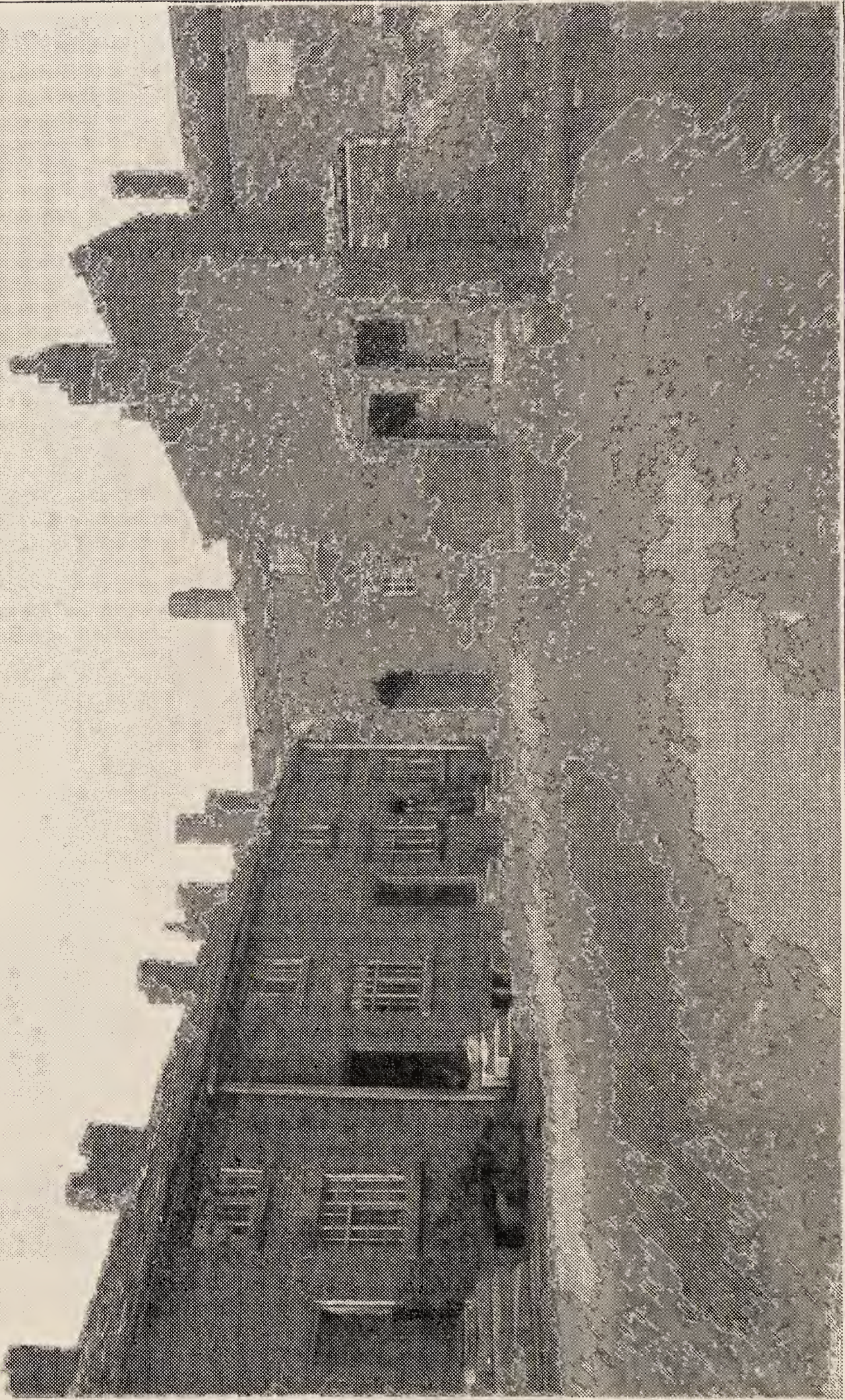
TUBERCULAR DISEASES.

Under this heading we include the consumptive diseases, such as phthisis, tabes mesenterica, tubercular meningitis, wasting diseases of infants, and other tubercular diseases.

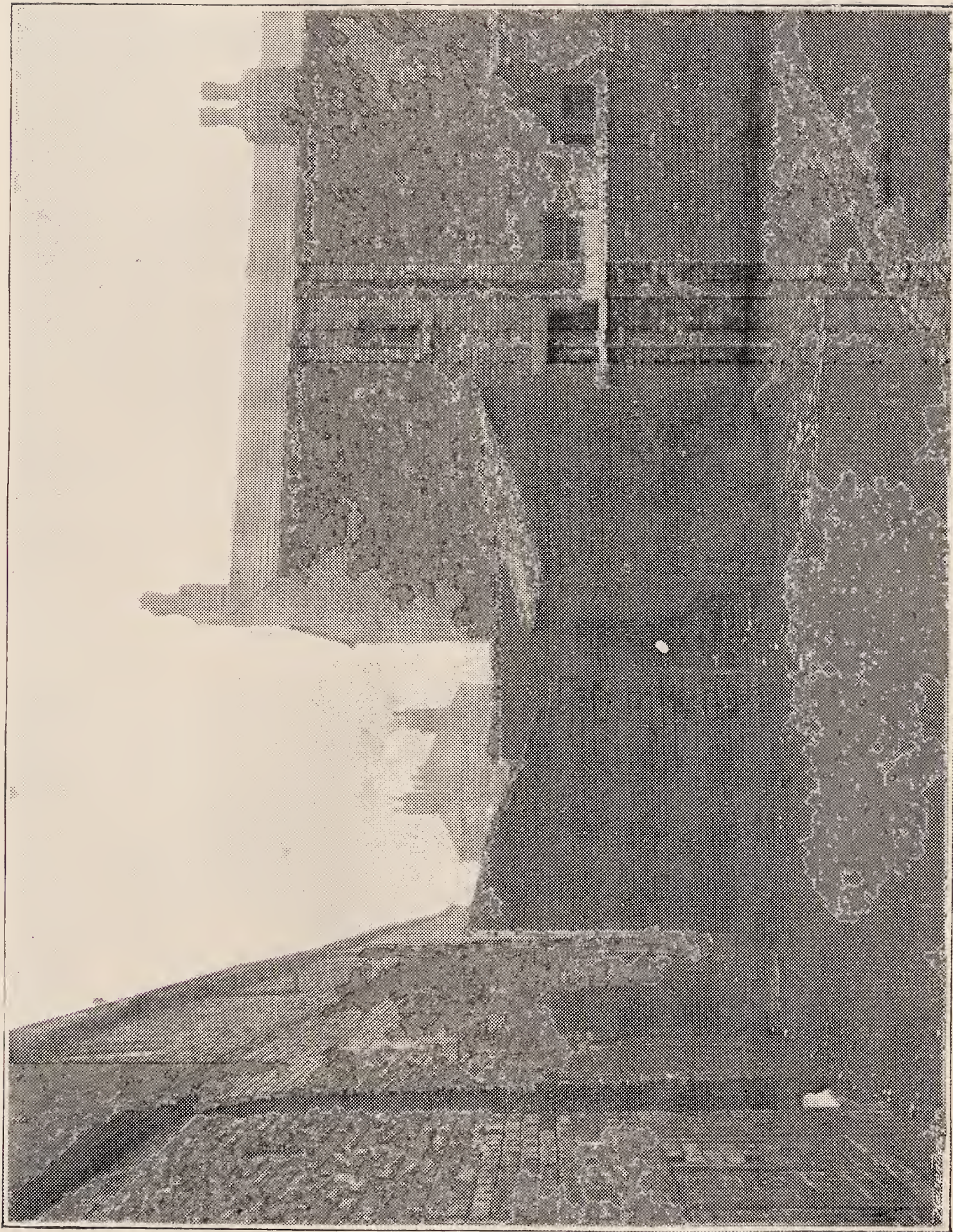
The number of deaths from phthisis is 66, or an average rate per 1,000 of 1.09. The number from wasting diseases of infants is 71, or an average rate per 1,000 of 1.17, and the number from other tubercular diseases is 38, or an average rate of .63. Consumption may be said to be (1) acquired and (2) hereditary, latterly it has become an opinion with some that it is not an hereditary disease, but is acquired altogether from faulty hygienic conditions. It is, however, impossible to remove entirely the hereditary theory, for often we see cases of consumption under the most favourable circumstances and surroundings. No doubt there are many cases in which we have the taint or germs of consumption, when faulty occupations, insanitary dwellings, vicious habits, kindle up the disease. Dr. Buchanan, the late principal medical officer of the Local Government Board, after numerous and laborious researches, came to the conclusion that “wetness of the soil is a cause of phthisis to the population living upon it.” The wasting diseases of infants are very often due to injudicious feeding during infancy, and this added to tubercular predisposition produces the affection known as tabes mesenterica, or consumption of the bowels, the disease being situated in the glands of the intestines.

RHEUMATISM.

is also a disease which is considered hereditary, but of an entirely different class to phthisis pulmonalis, though like phthisis in the respect that wetness of the soil is an exciting cause. The number of deaths from rheumatism were only 4, but we must remember that rheumatism in the acute form is only fatal as a rule through the heart, and we have 63 deaths from heart disease, and we may fairly conclude that three-fourths of these are caused by rheumatism.



GLASSBROOK'S YARD, VAUXHALL ROAD.



TOP END, HANOVER STREET.

LOCAL DISEASES.

Diseases of the Respiratory System.—Pneumonia and bronchitis caused 389 deaths (pneumonia 178, bronchitis 211), being equal to a death-rate of 6.45 per 1,000 of population.

We have many causes contributing to these diseases—severity of the weather, unhealthy occupations, insufficient clothing, and injudicious exposure all give rise to these diseases. We can only hope that these affections as a cause of death may disappear when the public are better educated in health matters, and pay more attention to personal and general hygienic conditions.

PROPERTY UNFIT FOR HUMAN HABITATION.

The following list of houses have been reported on to the Sanitary Committee, and also the Insanitary Houses Committee, under the Housing of the Working Classes Act, 1890, and condemned for the following reasons :—(1) No through ventilation ; (2) insanitary surroundings ; (3) defective and insufficient privy accommodation :—

Nos. 26, 28, and 30, Vauxhall Road.

„ 32, 34, and 36 „

„ 38, 40, 42, and 44 „

„ 46, 48, 50, and 52 „

„ 54, 56, 58, and 60 „

„ 1, 2, 3, 4, 5, and 6, Glassbrooks' Yard.

„ 1, 2, 3, and 4, Widdows' Yard.

„ 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, and 29, Bradshawgate.

„ 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 13, Hanover Street.

The Insanitary Houses Committee resolved “ That the nett rental upon which compensation should be paid, shall be calculated upon the three years ending 31st of December, 1895, instead of the three years ending 30th of June, 1889, as previously ordered. This was subsequently altered to the three years ending 31st of December, 1892, 1894, and 1895 respectively.

BAKEHOUSES.

The bakehouses in the borough have been regularly visited, and the requirements as to lime-washing attended to. On the whole the bakehouses are well kept, although some are faulty in construction.

During the year I made my first annual inspection, and presented your Committee with the following report :—

December 30th, 1897.

To the Chairman and Members of the Sanitary Committee.

GENTLEMEN,

It is one of my duties as your Medical Officer of Health to inspect, from time to time, all bakehouses, and to report to you thereon in respect

to the provisions of the Factory and Workshops Acts 1878 and 1883 respectively.

I have completed my first inspection of the whole of the known bakehouses in your County Borough, and beg to submit my report. The importance of supervision over places in which food stuffs are prepared for the use of man cannot be over-estimated, and my inspection, therefore, has been in accordance with what is laid down in the above-mentioned Acts, namely :—

1. General cleanliness.
2. Freedom from effluvia, from W.C.'s, privies, drains, etc.
3. Overcrowding.
4. Ventilation.

The number of bakehouses inspected is 69, and these I have classified as 1st, 2nd, and 3rd class.

We have in the 1st class	13
„ 2nd class	26
„ 3rd class	30
	—
Total	69
	—

The first class fulfil all requirements, are well kept, ventilated, and the surroundings are good.

The second class are those in which the surroundings are not desirable, such as unpaved yards and approaches, and are too encroached upon by other buildings, although many of them are well kept and are admirable bakehouses.

The third class are those which are either bad in themselves, are not well kept, ventilation defective, and some, although otherwise good, are cellar bakehouses, and therefore not desirable, either for the employés or for those who live above. There are 14 cellars, or underground bakehouses, and 2 under some portion of the house, and 1 under a bedroom. I found also some recent bakehouses with a stable adjoining, and in one, besides the stable, the pail closet in close proximity, and very little air space in the yard. In three instances the kitchen of the house was used as a bakehouse, and in two or three the back kitchen was so used, two gas stoves being employed. The inspection showed, however, that the bakehouses, as a whole, were well kept and clean, and the Act complied with as to lime-washing every six months. I would, however, suggest that in the building of new bakehouses the Streets Committee should refuse to pass plans (although the bye-laws as to buildings may be complied with) where the air space is insufficient, and where the stable and closets are in close proximity.

I am, Gentlemen,

Your obedient Servant,

WM. BERRY, M.O.H.

MEAT INSPECTION AND SLAUGHTERHOUSES.

During the year numerous inspections of slaughterhouses and of meat exposed for sale have been made by the Sanitary Inspectors, and in cases where it was deemed unfit for human food I have been called in to confirm or otherwise the opinion, and invariably the meat has had to be sent to the Miry Lane Dépôt. No prosecutions have arisen as the inspectors have been called by the owner to see if the meat was passable. From my own observation, however, I am convinced that meat of a very inferior quality is brought and slaughtered in the town, but under existing arrangements it is difficult to prevent it. Surprise visits have been paid, but without result. I hope, however, during the coming year to pay a visit of inspection to all the known slaughterhouses and report thereon. The Chief Sanitary Inspector's report will give details as to what has been done during 1896. An important seizure of tinned foods was made on March 31st, 1896, and the defendant was sent to gaol for one month, without the option of a fine.

BLACK SMOKE NUISANCES.

Numerous complaints have reached me concerning the emission of black smoke, which is certainly injurious to health, especially in thick, heavy, foggy, and damp weather, when the ill-effects are most perceptible. Numerous observations have been taken from time to time, and the offenders spoken to, cautioned, and served with notices, from time to time, with some improvement. I am convinced from my observations, and from information obtainable from other sources, that a great deal can be done to prevent the emission of dense black smoke. Without in any way wishing to interfere with our manufacturers, yet the health of our people should be our first care, and if manufacturers will allow nuisances to arise which are preventable, then it is our duty to take similar action against them as we should against other offenders.

WATER SUPPLY.

During the year we had for a considerable period an intermittent supply of water, and at one time the reports of the Public Analyst were not over reassuring as to its quality. The dangers of an intermittent water supply are many. I felt it my duty to mention the subject in my monthly report, dated September 17th, 1896. I wrote as follows:—"As regards the intermittent water supply, I have hitherto, in my previous reports, avoided touching on the matter, knowing that the Water Committee were making every endeavour in trying to obtain a sufficient supply; but as we are still suffering from a short supply, I must point out to you how desirable it is that we should, from a public health point of view, be relieved as soon as possible from this difficulty. I would urge on the

authorities to make, with as little delay as is convenient, such provision as is necessary to place us in a position that the water scares of the last few years, and the scant supply of one of the essentials of life, will be things of the past. I need not mention the many dangers of an intermittent supply of water, as they are well known, but in concluding this report, permit me to quote from Sir John Simon's first annual report, made November 6th, 1849, now nearly 50 years ago. He says "I am sure that I do not exaggerate the sanitary importance of water when I affirm that its unrestricted supply is the first essential of decency, of comfort, and of health." He says, further in the same report, "I consider the system of intermittent water supply to be radically bad, not only because it is a system of stint in what ought to be lavishly bestowed, but also because of the necessity which it creates that large and extensive receptacles should be provided, and because of the liability to contamination incurred by water which has to be retained often during a considerable period."

I am pleased to know that the Water Committee and the Corporation have entered into an arrangement with the Manchester Corporation which will, for the future, not only place us beyond the possibility of a short supply, but will also give us a water from Thirlmere of the purest character.

UNPAVED YARDS AND PASSAGES.

In concluding this report I wish to mention the great number of unpaved yards and passages in the borough. The subject has occupied the Sanitary Committee on various occasions during the year. I have also pointed out Dr. Buchanan's opinion of the danger of "wetness of the soil as a cause of phthisis." Other diseases also are undoubtedly aggravated by a wet subsoil. Another important reason, however, why all back yards and passages ought to be paved is, that it is impossible to keep the same free from recurring nuisances. Paving of streets, yards, and passages must go hand in hand with the sewerage, if we are ever to be free from enteric fever, because defective sewers, a wet subsoil, and a filthy yard forms an excellent breeding ground for the bacillus. I append, therefore, a list of unpaved back yards in two wards of the borough, which shall be completed in future reports.

UNPAVED YARDS.

POOLSTOCK WARD.

1, 3, 5, 7, Poolstock Lane.	25, 27, 29, Milton Street.
81, 83, 85, 87, 89, 91, Poolstock Lane.	1, Potter's Yard, Milton Street.
1, 3, 5, 7, Milton Street.	1, Mason's Yard „
9, 11, 13 „	1, Ascroft's Yard „
15, 17, 19 „	36, 38, 40, 42, 44, Chadwick Street.
21, 23 „	46, 48, 50, 52, 54 „

POOLSTOCK WARD.—(CONTINUED).

56, 58, 60, 62, 64, Chadwick Street.	1, 3, Walmer Street, Corporation St.
66, 68, 70, 72, 74 „	1, 3, Peet Street „
35, 37, 39, 41, 43, Byrom Street.	37 „ „
45, 47, 49, 51, 53 „	1, 2, 3, 4, 5, Piper's Alley, Swan
55, 57, 59, 61, 63 „	Meadow Road.
65, 67, 69, 71 „	1, 2, Pipe Shop Yard, Chapel Lane.
2, 4, 6, Park Street.	148, Chapel Lane.
2, 4, 6, 8, 10, Pool Street.	1, 2, 3, 4, 5, 6, 7, 8, Ormandy's Houses.
42, 44, 46 „	9, 10, 11, 12, 13, 14, 15, 16 „
22, 24, 26, 28, 30, Tipping Street.	17, 18, 19, 20, 21, 22, 23, 24 „
9, 11, 13, 15, 17, 19, Brook Street.	25, 26, 27, 28, 29, 30, 31, 32 „
1, 2, Hardman Street.	290, 292, 294, 296, Wallgate.
69, 71, 73, Corporation Street.	298, 300, 302, 304 „
75, 77, 79, 81 „	2, 4, Frith Street.
91, 93 „	12, 14, 16, 18, 20, 22, Frith Street
68, 70, 72, 74, 76, 78 „	24, 26, 28, 30, 32, 34 „

ST. PATRICK WARD.

9, 11, 13, 15, Silver Street.	15, 17, 19, 21, Teck Street.
17, 19, 21, 23 „	10a „
31, 33, 35, 37, 39, 41 „	12, 14, 16, 18 „
43, 45, 47 „	12, 14, 16, 18, 20, Bankes Street.
49, 51, 53, 55, 57 „	2, 4, 6 „
61, 63, 65, 81 „	2, Cambridge Street.
6, 8, 10, 12, 14 „	10, 12 „
24, 26, 28 „	26, 28, 30, 32, 34 „
30, 32, 34, 36, 38 „	18, 20, 22, 24 „
40, 42, 44 „	36 „
46, 48, 50, 52, 54, 56 „	38, 40, 42 „
1, 2, 3, Silver Terrace.	44, 46, 48, 50, 52 „
4, 5, 6, 7 „	1, 3, 5 „
1, 3, Halliwell's Terrace.	7, 9, 11, 13, 15 „
9, 11, 13, 15, 17, 19, 21, Dean Street.	17, 19, 21 „
23, 25, 27 „	47, 49, 51 „
8, 10 „	1, 3, Hambledon Street.
2, 4, 6 „	5, 7, 9, 11, 13 „
24, 26, 28, 30 „	2, 4, 6, 8, 10, Chancery Street.
1, 2, 3, 4, Zulu Street.	12, 14, 16, 18 „
5, 6, 7, 8, Afghan Street.	11, 13, 15, 17, 19 „
11, 13, Teck Street.	23, 25, 27, 29 „

ST. PATRICK WARD.—(CONTINUED).

31, 33, 35, 37, 39, Chancery Street.	79a, 81, Schofield Lane.
1, 3, St. Patrick Street.	89, 91, 93, 95, 97, 99, 101 „
5, 7 „	103 „
10, 12, 14, 16 „	107, 109, 111, 113,
18, 20, 22, 24, 26 „	115, 117 „
1, 3, Gee Street.	119, 121, 123, 125 „
5, 7, 9 „	14, 16, 18, Belvoir Street.
2, 4, 6, 8, 10, 12, „	1, 2, 3, 4, 5, 6, Leach's Yard,
14, 16 „	Belvoir Street.
2, 4, 6, 8, Anderton Street.	12, Pendlebury's Yard, St. Patrick
10, 12, 14, 16, 18 „	Street.
29, 31 „	19, 20, 21, 22, 23, 24, Fogg's Place,
33, 35, 37, 39, 41, 43, 45 „	Hardybutts.
1, 3, 5, 7, Higham Street.	3, 4, 5, 6, 7, Grundy's Yard, Hardy-
9, 11, 13, 15, 17, 19 „	butts.
21, 23, 25, 27 „	1, 2, 4, 5, 6, Low's Square, Hardy-
2, 4, 6, 8, 10, 12, 14, 16, 18 „	butts.
2, 4, 6, 8, McCormick Street.	13, 14, 15, 16, Low's Square, Hardy-
10, 12, 14, 16, 18, 20 „	butts.
22, 24, 26, 28 „	17, 18, 19, Low's Square, Hardy-
4, 6a, 8a, 10a, Hardybutts.	butts.
8, 12, 14 „	16, 17, 18, Acton's Court, Hardy-
18, 20 „	butts.
28, 32, 34 „	4, 5, 6, 7, Manchester Place, Hardy-
40a, 42a, 46a „	butts.
46 „	1, 3, 5, Rupert Street.
58, 60, 62, 64, 66, 68, 70 „	2, Roscoe Street.
78, 80 „	29, Warrington Lane.
82, 84, 86, 88 „	92, 94, 96, 98, 100, Warrington Lane.
102, 104, 106, 108, 110 „	2, 4, 6, 8, Lymn Street.
120, 122, 124 „	10, 12, 14, 16, 18, 20, Lymn Street.
146, 148, 150 „	1, 3, 5, 7 „
1, 11a, 13a „	1, 3, 5, 7, Silverwell Terrace.
29 „	67, 69, Darlington Street.
39, 41, 43, 45 „	71, 73, 75, 77, 79, 81, Darlington
55, 57, 59, 61, 63, 65 „	Street.
111, 113, 115, 117, 119,	83, 85, 87, 89, Darlington Street.
121, 123 „	1, 1a, 2, 3, 4, 5, 6, 7, 8, 9, 10, Dan-
125, 127, 129, 131, 133, 135 „	son's Square, Warrington Lane.
157, 152, 161, 163, 165 „	11, 12, 13, 14, 15, 16, 17, 18, 19,
167, 169, 171, 173, 175 „	Dansons Square, Warrington Lane.

ST. PATRICK WARD.—(CONTINUED.)

19, 21, 23, 25, 27, 29, Union Street.	2, 3, 4, 5, Mill Yard, Scholes.
1, 2, 3, 4, 5, 6, Back Union Street.	123, 125, 127 „
52, 53, 54, 55, 56, John Street.	8, 10, 12, Leigh Street.
57, 58, 59, 60, 61, 62 „	14, 16, 18, 20, 22, 24, Leigh Street.
7, 9, 11, 13, 15, 17, 19, Ashton Street.	2, 1, 3, 5, 7, 9, 11, Kent Street.
6, 8, 10, 12, 14, 16 „	6, 8, 10, 12, Spring Street.
1, 2, 3, 4, 5, 6, 7, 8, 9, Walsh's Yard, Scholes.	14, 16, 18, 20, 22, 24, Spring Street.
2, 3, 4, 5, 6, Bull and Dog Yard, Scholes.	26, 28, 30, 32 „

DEATHS IN 1896.

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CHART 1.

Weekly deaths from All Causes. (Red)

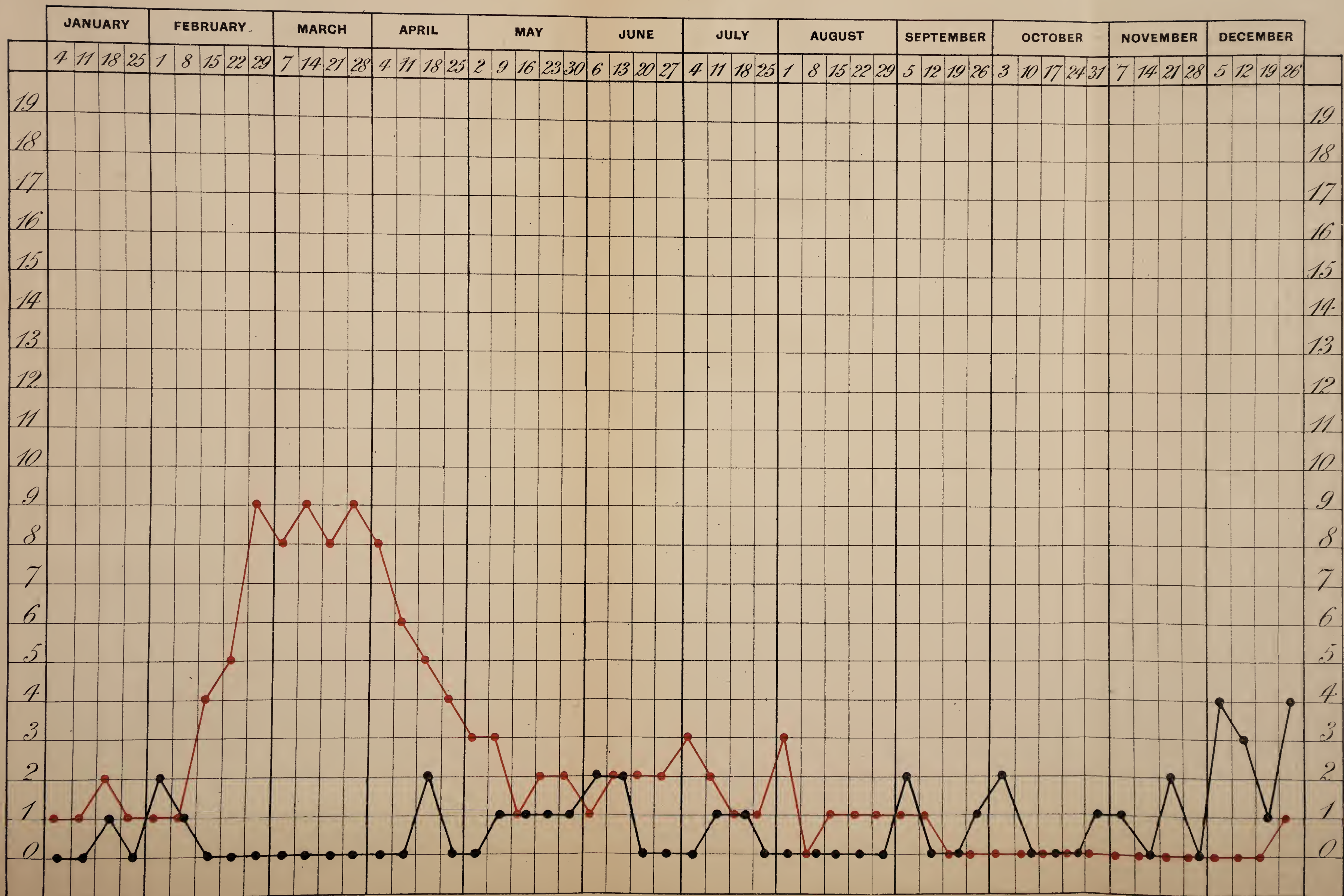
” ” ” Zymotics. (Black)



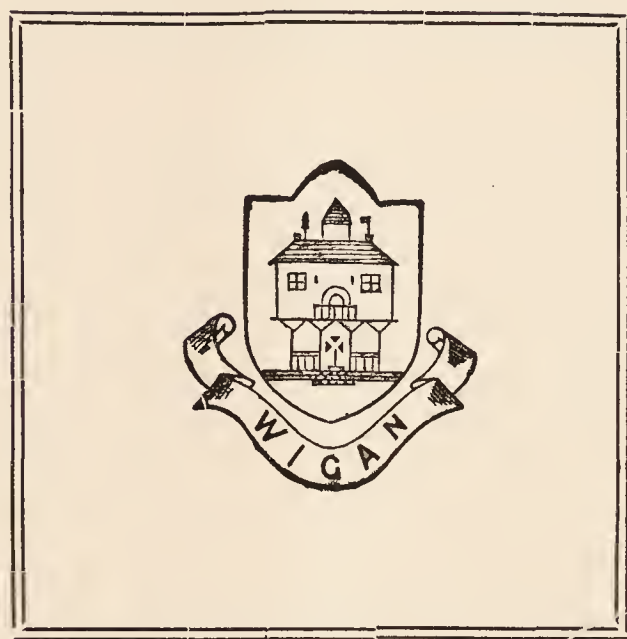
CHART 2.

Weekly deaths from Measles. (Red)

” ” ” Whooping Cough. (Black)



COUNTY BOROUGH OF WIGAN.



ANNUAL REPORT

OF THE

CHIEF SANITARY INSPECTOR.

JOHN SUMNER, Assoc. San. Inst.



WIGAN :

THOS. WALL AND SONS, PRINTERS, "OBSERVER" OFFICE, WALLGATE.

1897.

Annual Report of the Chief Sanitary Inspector

SANITARY DEPARTMENT,

17, RODNEY STREET,

JANUARY, 1897.

To the Chairman and Members of the Sanitary and Sewerage Committee.

GENTLEMEN,

I have the honour to submit to you my Sixth Annual Report of the work done by your Inspectors during the year ending December 31st, 1896.

The usual tabulated statements will be found to explain much of the work of the Department.

House to house inspection has been continued, but owing to the extra work involved by the more frequent visiting of infectious cases has not been so extensively proceeded with as beforetime ; nearly the whole of the Borough has been gone through with the object of preparing a statement as to the condition of the yards and passages.

The large factories of the town have been visited during the year, and the sanitary conveniences are now, I am glad to say, in a very good condition.

The subject of unpaved yards has been further discussed, and a list of the whole of the yards in the Borough is in course of compilation ; notices have been freely served, and in many instances the yards have been put into a much better condition.

SUMMARY OF NUISANCES DEALT WITH DURING 1896.

Houses and Premises inspected ...	...	...	3,730
Nuisances discovered ...	...	...	1,868
„ abated ...	...	...	1846
Notices issued (preliminary) ...	...	...	919
„ (formal) ...	...	...	180
Circular letters sent out ...	...	...	232
Re-inspections made (about) ...	...	...	5,350
Summonses taken out ...	...	...	9
Convictions or “orders to abate” ...	...	...	7
Dismissed or withdrawn ...	...	...	2
Amount of penalties ...	...	...	Nil.
„ costs ...	...	...	£5 1 0
Nuisances on the book December 31st, 1895 ...	...	...	98
„ „ December 31st, 1896 ..	...	...	126

COMMON LODGING-HOUSES.

During the past year five of the old class of lodging-houses have been demolished, and two others have been given up, whilst two have been registered. With the exception of the three in Ryland Row, I don't think any town of the size of Wigan is supplied with better accommodation for promiscuous travellers. One prosecution has been undertaken for keeping an unregistered common lodging-house, and a fine of 5s. and costs was imposed.

No. of Common Lodging-Houses in the Borough	...	...	17
„ Lodgers allowed nightly	...	...	583
„ Visits by day	...	...	1315
„ „ „ night...	...	...	553
„ Lodgers reported as being received	...	...	137593
„ Summonses taken out	...	...	1
„ Convictions	...	...	1
Amount of fine	...	...	5s.
„ costs	...	...	19s. 6d.

CANAL BOATS ACTS, 1877-1884.

During the year I have completed my inquiries respecting the boats on the register, and have had several communications from Her Majesty's Chief Inspector respecting boats which have been sold or disused. There are now 149 boats on the register, 5 new boats having been registered during the year; 6 other boats have been re-registered. On December 19th, J. Brydone, Esq., Chief Inspector of Canal Boats, paid his usual visit and inspected the books, registers, &c.

Number of Canal Boats on Register on December 31st, 1895	...	144
„ Appl. ations for Registration	...	5
„ „ Re-registration	...	6
„ „ granted	...	11
„ Inspections made	...	207
„ Contraventions of Regulations	...	12
„ Notices issued	...	7
„ „ complied with	...	6
„ „ outstanding	...	1

The Contraventions were as follows :—No certificate, 4 ; certificate not identifying owner with boat, 2 ; dirty, 1 ; want painting, 2 ; dilapidated, 1 ; leaky, 1 ; intermixing of sexes, 1.

SLAUGHTER-HOUSES, &c.

There are now 22 slaughter-houses, 2 fellmongery establishments, and 2 gut-scraping premises registered in the Borough, and visits have been made to them during the year.

The markets have also been regularly visited, and generally found satisfactory.

The following shows the unwholesome food seized :—

No. of seizures.				Articles.				Weight.
4	...	...	...	Beef.	...	...	...	2,128lbs.
1	...	...	...	Pork	...	...	...	280lbs.
7	...	...	...	Flat Fish	...	...	...	2,188lbs.
1	...	...	...	Shell Fish	...	...	...	340lbs.
1	...	...	...	Tinned Fish	...	...	...	1203 tins.
1	...	...	...	Tinned Fruit	...	...	...	30 tins.
1	...	...	...	Onions	...	...	...	10 barrels.
Number of Prosecutions				...	...	...	...	2
,, Convictions				...	...	...	...	2
Amount of Fine				...	...	...	£1 0 0	
,, Costs				...	...	...	£1 12 6	

One defendant was sent to gaol for a month with hard labour.

The undermentioned were destroyed at Miry Lane Dépôt, where they had been taken by the tradesmen of the town after having been inspected and declared unfit for food :—

						Tons. cwts. qrs.		
Fish and Shell Fish	...	...	...	...	...	20	10	1
Pork	...	...	...	...	...		5	0
Cheese	...	...	...	...	...		2	2
Rabbits	...	...	...	...	...		7	0

INFECTIOUS DISEASES (PREVENTION) ACT, 1890.

The following statistics show the work done under the above Act during the year :—

Number of Houses disinfected	...	...	...	285
„ Rooms „	...	...	...	512
„ Beds „	...	...	...	254
„ Mattresses „	...	...	...	206
„ Blankets and Sheets disinfected			...	959
„ Other articles „			...	850
„ Houses limewashed and cleaned			...	202

SALE OF FOOD AND DRUGS ACTS, 1875 AND 1879.

Number of Samples obtained	...	...	...	34
„ genuine	...	...	...	34
„ adulterated	...	...	...	Nil

The articles obtained were—

Milk	...	...	...	...	...	10
Butter	...	...	...	...	...	14
Whiskey	...	...	...	...	...	10

COMMON LODGING-HOUSES.

No. on Register.				No. Registered for.
5	1, 3, and 5, Union Street	...	...	48
7	87, 89, and 91, Millgate	...	...	44
8	1, Hardybutts	...	...	24
10	31, Scholes	...	...	15
12	1, Swift's Yard, Millgate	...	...	38
14	7, Hardybutts	...	...	11
18	21, Rylance Row	...	...	9
19	22, Rylance Row	...	...	7
21	17, Rylance Row	...	...	22
24	28, Wiend	...	...	41
26	30, Hallgate	...	...	16
34	27, Hallgate	...	...	85
35	19, Warrington Lane	...	...	29
37	7 and 9, Union Street	...	...	52
38	36 and 38, Hardybutts	...	...	88
39	21, Hardybutts	...	...	17
40	5, 7, and 9, Scholes	...	...	37

SLAUGHTER-HOUSES.

No. on
Register.

1	Behind 8, Darlington Street...	...	...	T. Moore.
2	Behind 60, Darlington Street	...	...	J. H. Green.
4	Watmough's Yard, Scholes	...	...	W. McAvoy.
6	Upper Morris Street	...	...	W. Walsh.
7	Rigby's Buildings, Scholes	...	...	H. Smith.
8	Behind 124, Scholes	...	...	James Watts.
11	Wiend...	...	...	Henry Sawbridge.
12	Water Street	...	...	J. H. & W. Cordeaux.
14	Behind 75, Wigan Lane	...	...	James Jackson.
18	Bottom Croft...	...	...	Robert Johnson.
19	Shaw's Yard, Hallgate	...	...	John Smirk.
21	Marsh's Yard, Wallgate	...	...	R. Barlow.
24	Clayton Street	...	...	O. Sawbridge.
28	Hilton's Yard, Scholes	...	...	J. Hilton.
29	Mill Yard, Scholes	...	...	E. Hamill.
30	Behind 53, Birkett Bank	...	...	W. Hasleden.
32	Altham's Yard, Standishgate	...	...	L. Mynekyme.
35	New Square	...	...	F. Knorzer.
36	Silver Street	...	...	E. McAvoy.
39	Behind 133, Standishgate	...	...	Joseph Hill.
40	Lyon's Yard, Ironmonger Lane	...	...	G. Schofield.
41	Behind 122, Scholes	...	...	James Lowe.

FELLMONGERS.

Millgate	...	...	...	T. E. Dix.
Water Street	...	...	...	Exors. of W. Brayshay.

GUT SCRAPERS.

Shaw's Yard, Hallgate	...	...	Christopher Eckman.
Robin Hood Yard, Hallgate...	...	...	Carl Harder.

OFFENSIVE TRADES.

These places of business have been regularly inspected during the year, and have been kept in such a good condition that the complaints respecting the premises, which are naturally numerous in warm weather, have this year been almost nil.

SMOKE NUISANCE.

There has been a steady improvement in this during the year, and, with a little more care on behalf of the firemen, might be fairly satisfactory.

INSANITARY PROPERTY.

Several blocks have been visited and dealt with, and are included in the report of the Medical Officer of Health.

FACTORY AND WORKSHOPS ACTS.

Two hundred and twenty-two visits have been made to workshops during the year, and 25 premises have been limewashed. At several workshops extra closet accommodation has been provided, and several structural alterations have taken place. A number of official complaints have been made to your Sanitary Authority by Her Majesty's Inspectors, and in each case the work asked for has been done. I have visited the factories and several workshops with H.M. Inspectors, and a correspondence with Miss Anderson *re* Trencherfield Mill has been satisfactorily settled.

In conclusion I have to thank you, gentlemen, for your support during the past year, and Mr. Short, Mr. Bishop, and the others of my staff for their attention to their duties during a very trying year.

The larger portion of Mr. Short's time has been taken up with the Infectious Diseases Notification Act, with gratifying results, as shown by the Medical Officer of Health.

As an Inspector under the Shop Hours Act Mr. Bishop has been of valuable service, and the different workrooms are now in a very good state.

I remain, Gentlemen,

Your obedient Servant,

JOHN SUMNER,

Chief Sanitary Inspector and

Inspector of Nuisances.

